

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number
WO 2005/066066 A1

(51) International Patent Classification⁷: **B81B 1/00**

(21) International Application Number: PCT/SE2004/002030

(22) International Filing Date: 29 December 2004 (29.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0400007-1 2 January 2004 (02.01.2004) SE
60/534,832 7 January 2004 (07.01.2004) US

(71) Applicant (for all designated States except US): **GYROS AB** [SE/SE]; Uppsala Science Park, S-751 83 Uppsala (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SÖRNDAL, Gösta** [SE/SE]; Läbygatan 3, S-752 39 Uppsala (SE).

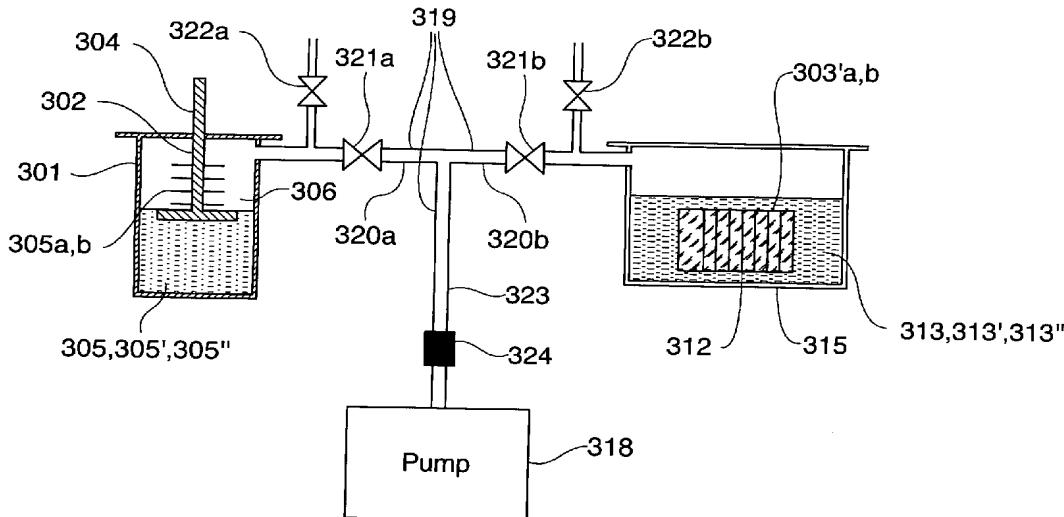
(74) Agent: **BERGANDER, Håkan**; Gyros AB, Uppsala Science Park, S-751 83 Uppsala (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: LARGE SCALE SURFACE MODIFICATION OF MICROFLUIDIC DEVICES



(57) Abstract: A method for the modification of an inner surface in each of one, two or more microchannel structures of a microfluidic device. Each of the microchannel structures comprises one, two or more ports (PT) communicating with ambient atmosphere. The microconduit part comprises the inner surface to be modified. The method comprises for each microchannel structure the steps of: (I) filling the microconduit part with a liquid containing a surface modification agent through at least one port (PT') of said one, two or more ports (PT), (II) incubating said liquid within said microconduit part, and (III) removing said liquid from said microconduit part, for instance from the microchannel structures comprising said microconduit part. The method is characterized in that reduced pressure is utilized for filling in step (I).

WO 2005/066066 A1



Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.